

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

PAULINE M. AHERN, CRRA  
PRINCIPAL

AUS CONSULTANTS

**PROFESSIONAL QUALIFICATIONS  
OF  
PAULINE M. AHERN, CRRA  
PRINCIPAL  
AUS CONSULTANTS**

**PROFESSIONAL EXPERIENCE**

**1994-Present**

In 1996, I became a Principal of AUS Consultants, continuing to offer testimony as an expert witness on the subjects of fair rate of return, cost of capital and related issues before state public utility commissions. I provide assistance and support to clients throughout the entire ratemaking litigation process. In addition, I supervise the financial analyst and administrative staff in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assists in the preparation of interrogatory responses, as well as rebuttal exhibits.

As the Publisher of AUS Utility Reports (formerly C. A. Turner Utility Reports), I am responsible for the production, publishing, and distribution of the reports. AUS Utility Reports provides financial data and related ratios for about 80 public utilities, i.e., electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis. Among the subscribers of AUS Utility Reports are utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries. The publication has continuously provided financial statistics on the utility industry since 1930.

I am also responsible for maintaining and calculating the performance of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA, which serves as the benchmark for the AGA Gas Utility Index Fund.

As an Assistant Vice President from 1994 - 1996, I prepared fair rate of return and cost of capital exhibits which were filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I also submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

**1990-1994**

As a Senior Financial Analyst, I supervised two analysts and assisted in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assisted in the preparation of interrogatory responses.

I evaluated the final orders and decisions of various commissions to determine whether further actions were warranted and to gain insight which assisted in the preparation of future rate of return studies.

I assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

In 1992, I was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the National Society of Rate of Return Analysts (now the Society of Utility and Regulatory Financial Analysts (SURFA)). This designation is based upon education, experience and the successful completion of a comprehensive examination.

As Administrator of Financial Analysis for AUS Utility Reports, which then reported financial data for over 200 utility companies with approximately 1,000 subscribers, I oversaw the preparation of this monthly publication, as well as the accompanying annual publication, Financial Statistics - Public Utilities.

#### 1988-1990

As a Financial Analyst, I assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on equity. I also assisted in the preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony. I also assisted in the preparation of the annual publication C. A. Turner Utility Reports - Financial Statistics - Public Utilities.

#### 1973-1975

As a Research Assistant in the Research Department of the Regional Economics Division of the Federal Reserve Bank of Boston, I was involved in the development and maintenance of econometric models to simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I was Assistant Editor of New England Business Indicators.

#### 1972

As a Research Assistant in the Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C., I developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

#### Clients Served

I have offered expert testimony before the following commissions:

Arkansas	Maryland
Arizona	Michigan
British Columbia	Missouri
California	Nevada
Connecticut	New Hampshire
Delaware	New Jersey
Florida	New York
Hawaii	North Carolina
Idaho	Ohio
Illinois	Pennsylvania
Indiana	Rhode Island
Iowa	South Carolina
Kentucky	Virginia
Louisiana	Washington
Maine	

I have sponsored testimony on fair rate of return and related issues for:

Alpena Power Company	Aqua New Jersey, Inc.
Apple Canyon Utility Company	Aqua North Carolina, Inc.
Applied Wastewater Management, Inc.	Aqua Ohio, Inc.
Aqua Illinois, Inc.	Aqua Virginia, Inc.
Aquarion Water Company	The Atlantic City Sewerage Company
Aquarion Water Co. of New Hampshire, Inc.	Audubon Water Company
Arizona Water Company	Bermuda Water Company
Artesian Water Company	Carolina Pines Utilities, Inc.

Carolina Water Service, Inc. of NC  
 Carolina Water Service, Inc. of SC  
 Chaparral City Water Company  
 The Columbia Water Company  
 The Connecticut Water Company  
 Consumers Illinois Water Company  
 Consumers Maine Water Company  
 Consumers New Jersey Water Company  
 City of DuBois, Pennsylvania  
 Elizabethtown Water Company  
 Emporium Water Company  
 EPCOR Water Arizona, Inc.  
 Greenridge Utilities, Inc.  
 GTE Hawaiian Telephone Inc.  
 The Borough of Hanover, PA  
 Illinois American Water Company  
 Indiana American Water Company  
 Iowa American Water Company  
 Jersey Central Power & Light Co.  
 Lake Wildwood Utilities Corp.  
 Land'Or Utility Company  
 Long Island American Water Company  
 Long Neck Water Company  
 Louisiana Water Service, Inc.  
 Massanutten Public Service Company  
 Middlesex Water Company  
 Missouri-American Water Company  
 Mt. Holly Water Company  
 Nero Utility Services, Inc.  
 New Jersey Utilities Association  
 The Newtown Artesian Water Company  
 NRG Energy Center Harrisburg LLC  
 NRG Energy Center Pittsburgh LLC  
 Ohio-American Water Company  
 Penn Estates Utilities  
 Pinelands Waste Water Company  
 Pinelands Water Company  
 Pittsburgh Thermal  
 San Gabriel Valley Water Company  
 San Jose Water Company  
 Southland Utilities, Inc.  
 Spring Creek Utilities, Inc.  
 Sussex Shores Water Company

Tega Cay Water Services, Inc.  
 Thames Water Americas  
 Tidewater Utilities, Inc.  
 Total Environmental Services, Inc. –  
     Treasure Lake Water & Sewer Divisions  
 Transylvania Utilities, Inc.  
 Trigen – Philadelphia Energy Corporation  
 Twin Lakes Utilities, Inc.  
 United Utility Companies  
 United Water Arkansas, Inc.  
 United Water Arlington Hills Sewerage, Inc.  
 United Water Connecticut, Inc.  
 United Water Delaware, Inc.  
 United Water Great Gorge Inc./United Water  
     Vernon Transmission, Inc.  
 United Water Idaho, Inc.  
 United Water Indiana, Inc.  
 United Water New Jersey, Inc.  
 United Water New Rochelle, Inc.  
 United Water New York, Inc.  
 United Water Owego/Nichols, Inc.  
 United Water Pennsylvania, Inc.  
 United Water Rhode Island, Inc.  
 United Water South County, Inc.  
 United Water Toms River, Inc.  
 United Water Vernon Sewage Inc.  
 United Water Virginia, Inc.  
 United Water West Lafayette, Inc.  
 United Water West Milford, Inc.  
 United Water Westchester, Inc.  
 Utilities, Inc.  
 Utilities Inc. of Central Nevada  
 Utilities, Inc. of Florida  
 Utilities, Inc. of Louisiana  
 Utilities, Inc. of Nevada  
 Utilities, Inc. of Pennsylvania  
 Utilities, Inc. - Westgate  
 Utilities Services of South Carolina  
 Utility Center, Inc.  
 Valley Energy, Inc.  
 Water Services Corp. of Kentucky  
 Wellsboro Electric Company  
 Western Utilities, Inc.

I have sponsored testimony on generic/uniform methodologies for determining the return on common equity for:

Aquarion Water Company  
 The Connecticut Water Company  
 Corix Multi-Utility Services, Inc.

United Water Connecticut, Inc.  
 Utilities, Inc.

I have sponsored testimony on the rate of return and capital structure effects of merger and acquisition issues for:

California-American Water Company

New Jersey-American Water Company

I have sponsored testimony on capital structure and senior capital cost rates for the following clients:

Alpena Power Company

Arkansas-Western Gas Company

Associated Natural Gas Company  
PG Energy Inc.

United Water Delaware, Inc.  
Washington Natural Gas Company

I have sponsored testimony on Distribution System Improvement Charges (DSIC):

Arizona Water Company

I have assisted in the preparation of rate of return studies on behalf of the following clients:

Algonquin Gas Transmission Company  
Anadarko Petroleum Corporation  
Arizona Water Company  
Arkansas-Louisiana Gas Company  
Arkansas Western Gas Company  
Artesian Water Company  
Associated Natural Gas Company  
Atlantic City Electric Company  
Bridgeport-Hydraulic Company  
Cambridge Electric Light Company  
Carolina Power & Light Company  
Citizens Gas and Coke Utility  
City of Vernon, CA  
Columbia Gas/Gulf Transmission Cos.  
Commonwealth Electric Company  
Commonwealth Telephone Company  
Conestoga Telephone & Telegraph Co.  
Connecticut Natural Gas Corporation  
Consolidated Gas Transmission Company  
Consumers Power Company  
CWS Systems, Inc.  
Delmarva Power & Light Company  
East Honolulu Community Services, Inc.  
Equitable Gas Company  
Equitrans, Inc.  
Florida Power & Light Company  
Gary Hobart Water Company  
Gasco, Inc.  
GTE Arkansas, Inc.  
GTE California, Inc.  
GTE Florida, Inc.  
GTE Hawaiian Telephone  
GTE North, Inc.  
GTE Northwest, Inc.  
GTE Southwest, Inc.  
Great Lakes Gas Transmission L.P.  
Hawaiian Electric Company  
Hawaiian Electric Light Company  
IES Utilities Inc.  
Illinois Power Company  
Interstate Power Company  
Interstate Power & Light Co.  
Iowa Electric Light and Power Company  
Iowa Southern Utilities Company  
Kentucky-West Virginia Gas Company  
Lockhart Power Company  
Middlesex Water Company  
Milwaukee Metropolitan Sewer District  
Mountaineer Gas Company

National Fuel Gas Distribution Corp.  
National Fuel Gas Supply Corp.  
Newco Waste Systems of NJ, Inc.  
New Jersey Natural Gas Company  
New Jersey-American Water Company  
New York-American Water Company  
North Carolina Natural Gas Corp.  
Northumbrian Water Company  
Ohio-American Water Company  
Oklahoma Natural Gas Company  
Orange and Rockland Utilities  
Paiute Pipeline Company  
PECO Energy Company  
Penn Estates Utilities, Inc.  
Penn-York Energy Corporation  
Pennsylvania-American Water Co.  
PG Energy Inc.  
Philadelphia Electric Company  
Providence Gas Company  
South Carolina Pipeline Company  
Southwest Gas Corporation  
Stamford Water Company  
Tesoro Alaska Petroleum Company  
Tesoro Refining & Marketing Co.  
United Telephone of New Jersey  
United Utility Companies  
United Water Arkansas, Inc.  
United Water Delaware, Inc.  
United Water Idaho, Inc.  
United Water Indiana, Inc.  
United Water New Jersey, Inc.  
United Water New York, Inc.  
United Water Pennsylvania, Inc.  
United Water Virginia, Inc.  
United Water West Lafayette, Inc.  
Utilities, Inc. of Pennsylvania  
Utilities, Inc. - Westgate  
Vista-United Telecommunications Corp.  
Washington Gas Light Company  
Washington Natural Gas Company  
Washington Water Power Corporation  
Waste Management of New Jersey -  
Transfer Station A  
Wellsboro Electric Company  
Western Reserve Telephone Company  
Western Utilities, Inc.  
Wisconsin Power and Light Company

## EDUCATION:

1973 – Clark University – B.A. – Honors in Economics (Concentration: Econometrics and Regional/International Economics)

1991 – Rutgers University – M.B.A. – High Honors (Concentration: Corporate Finance)

## PROFESSIONAL AFFILIATIONS:

Standard and Poor's Capital IQ Client Advisory Board

Advisory Council – New Mexico State University Center for Public Utilities

Advisory Board – Financial Research Institute – University of Missouri's Trulaske School of Business

Edison Electric Institute – Cost of Capital Working Group

National Association of Water Companies – Member of the Finance/Accounting/Taxation and Rates and Regulation Committees

Society of Utility and Regulatory Financial Analysts

Member, Board of Directors – 2010-2014

President – 2006-2008 and 2008-2010

Secretary/Treasurer – 2004-2006

American Finance Association

Financial Management Association

Energy Bar Association

Energy Association of Pennsylvania

## SPEAKING ENGAGEMENTS:

"The Return on Equity Debate: Its Impact on Budgeting and Investment and Wall Street's View of Risk", National Association of Water Companies – 2014 Indiana Chapter Water Summit, March 13, 2014, Indianapolis, IN.

"Regulatory Training in Financing, Planning, Strategies and Accounting Issues for Publicly- and Privately-Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, October 13-18, 2013, Instructor (Cost of Capital).

"Regulated Utilities – Access to Capital", (panelist) - Innovation: Changing the Future of Energy, 2013 Deloitte Energy Conference, Deloitte Center for Energy Solutions, May 22, 2013, Washington, DC.

"Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 32<sup>nd</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 17, 2013, Rutgers University, Shawnee on the Delaware, PA.

"Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45<sup>th</sup> Financial Forum, April 17-18, 2013, Indianapolis, IN.

"Issues Surrounding the Determination of the Allowed Rate of Return", before the Staff Subcommittee on Electricity of the National Association of Regulatory Utility Commissioners, Winter 2013 Committee Meetings, February 3, 2013, Washington, DC.

"Leadership in the Financial Services Sector", Guest Professor – Cost of Capital, Business Leader Development Program, Rutgers University School of Business, February 1, 2013, Camden, NJ.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, December 12, 2012, Instructor (Financial Statement Analysis).

"Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, October 14-19, 2012, Instructor (Cost of Financial Capital).

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Edison Electric Institute Cost of Capital Working Group, October 3, 2012, Webinar.

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Commissioners, September 10, 2012, St. Paul, MN.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, August 7, 2012, Instructor (Financial Statement Analysis).

"Advanced Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, May 13-17, 2012, Instructor (Cost of Financial Capital).

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", before the Finance and Regulatory Committees of the National Association of Water Companies, March 29, 2012, Telephonic Conference.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Frank J. Hanley, Principal and Director, AUS Consultants) before the Water Committee of the National Association of Regulatory Utility Commissioners' Winter Committee Meetings, February 7, 2012, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University and Frank J. Hanley, Principal and Director, AUS Consultants) before the Wall Street Utility Group, December 19, 2011, New York City, NY.

"Advanced Cost and Finance Issues for Water", (co-presenter with Gary D. Shambaugh, Principal & Director, AUS Consultants), 2011 Advanced Regulatory Studies Program – Ratemaking, Accounting and Economics, September 29, 2011, Kellogg Center at Michigan State University – Institute for Public Utilities, East Lansing, MI.

"Public Utility Betas and the Cost of Capital", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 30<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2011, Rutgers University, Skytop, PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 43<sup>rd</sup> Financial Forum – "Impact of Cost Recovery Mechanisms on the Perception of Public Utility Risk", April 14-15, 2011, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Hot Topic Hotline Webinar, December 3, 2010, Financial Research Institute of the University of Missouri.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) before the Indiana Utility Regulatory Commission Cost of Capital Task Force, September 28, 2010, Indianapolis, IN

Tomorrow's Cost of Capital: Cost of Capital Issues 2010, Deloitte Center for Energy Solutions, 2010 Deloitte Energy Conference, "Changing the Great Game: Climate, Customers and Capital", June 7-8, 2010, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 29<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2010, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 42<sup>nd</sup> Financial Forum – "The Changing Economic and Capital Market Environment and the Utility Industry", April 29-30, 2010, Washington, DC

"A New Model for Estimating the Equity Risk Premium for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Spring 2010 Meeting of the Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Utility Commissioners, March 17, 2010, Charleston, SC

"New Approach to Estimating the Cost of Common Equity Capital for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) - Advanced Workshop in Regulation and Competition, 28<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 14, 2009, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 41<sup>st</sup> Financial Forum – "Estimating the Cost of Capital in Today's Economic and Capital Market Environment", April 16-17, 2009, Washington, DC

"Water Utility Financing: Where Does All That Cash Come From?", AWWA Pre-Conference Workshop: Water Utility Ratemaking, March 25, 2008, Atlantic City, NJ

#### PAPERS:

"Empirical Tests of the Generalized Consumption Asset Pricing Model for Estimating the Cost of Common Equity Capital for Public Utilities", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, (Working Paper).

"Comparative Evaluation of the Predictive Risk Premium Model<sup>TM</sup>, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, and Frank J. Hanley, The Electricity Journal, May, 2013.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", co-authored with Frank J. Hanley and Richard A. Michelfelder, Ph.D., Rutgers University, The Journal of Regulatory Economics (December 2011), 40:261-278.

"Comparable Earnings: New Life for Old Precept" co-authored with Frank J. Hanley, Financial Quarterly Review, (American Gas Association), Summer 1994.